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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,440	08/01/2001	Koichi Maruyama	P21012	4706

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RESTON, VA 20191

EXAMINER

AMARI, ALESSANDRO V

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

7.81

## Office Action Summary

Application No.

09/918,440

Applicant(s)

MARUYAMA, KOICHI

Examiner

Alessandro V. Amari

Art Unit

2872

-- **Th MAILING DATE of this communication appears on the cov r sheet with the correspond nce addr ss --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Response to Appeal Brief**

1. In view of the appeal brief filed on 19 May 2003, PROSECUTION IS HEREBY REOPENED. A new ground of rejection as set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2 and 5-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito U.S. Patent 6,313,956.

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In regard to claims 1, 6 and 7, Saito et al discloses (see Figures 12(a), 12(b), 13 and 16(a)) an objective lens for an optical pick-up, at least one surface of said objective lens being an aspherical surface as described in column 13, lines 1-5, said at least one surface being divided into an effective area (Sd2) and an outer area (Sd3) outside said effective area, said effective area and said outer area being formed such that a predetermined gap is caused between a spherical aberration of a light beam passed through said effective area and a spherical aberration of a light beam passed through said outer area as described in column 11, lines 29-37, a diffraction lens structure being formed on said at least one surface within said effective area as described in column 18, lines 4-10, said outer area being connected with a base curve which is a macroscopic shape of said at least one surface within said effective area as shown in Figures 12(a), 13 and 16(a) and as described in column 27, lines 29-37, the light beam passed through said effective area forming a beam spot on a predetermined surface, the light beam passed through said outer area being diffused on the predetermined surface in comparison with the beam spot as shown in Figures 12(a) and 13 and as described in column 13, lines 1-24.

Regarding claims 2 and 8, Saito discloses said diffraction lens structure including a plurality of concentric annular zones formed on said at least one surface as described in column 18, lines 4-10.

Regarding claims 5 and 9, Saito discloses that said at least one surface in said outer area is a continuous surface having no diffraction lens structure as shown in Figure 12(a) and 13.

Regarding claim 10, Saito discloses that said outer area being configured such that a predetermined gap is provided between a spherical aberration of the light beam passing through said effective area and a spherical aberration of a light beam passing through said area as described in column 11, lines 29-37.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito U.S. Patent 6,313,956.

Regarding claims 3, 4, 11 and 12, Saito discloses the invention as set forth above but does not teach an absolute value of said gap is equal to or greater than 10 micrometers or an absolute value of said gap is approximately 200 micrometers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the gaps having the specified values, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to select the gaps with the specified values for the purpose of correcting for spherical aberration. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamazaki et al U.S. Patent 6,370,103 teaches an objective lens for an optical pick-up, at least one surface of said objective lens being an aspherical surface, said at least one surface being divided into an effective area and an outer area outside said effective area, said effective area and said outer area being formed such that a predetermined gap is caused between a spherical aberration of a light beam passed through said effective area and a spherical aberration of a light beam passed through said outer area, a diffraction lens structure being formed on said at least one surface within said effective area, said outer area being connected with a base curve which is a macroscopic shape of said at least one surface within said effective area, the light beam passed through said effective area forming a beam spot on a predetermined surface, the light beam passed through said outer area being diffused on the predetermined surface in comparison with the beam spot as shown in Figures 5(a) and 6 and as described in column 25, lines 49-67 and column 29, lines 11-18.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (703) 306-0533. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (703) 305-0024. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ava *ava*  
July 23, 2003

  
**MARK A. ROBINSON**  
**PRIMARY EXAMINER**